

SFAN Phase II Summary of Reviewer's Comments
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The following highlights the SFAN Phase II Report comments submitted by four reviewers, Deborah Elliott-Fisk, Reginald Barrett, Steven Schwarzbach, and John Gross. Additional comments and details are included in the official review forms submitted by the reviewers and on edited copies of the manuscript.

Deborah Elliott-Fisk

Overall the comments were positive, constructive, and encouraging. The reviewer believed that the SFAN had “done a remarkable job in both (1) effectively communicating the objectives, management needs, and goals of the Inventory and Monitoring Program, and (2) in getting to the heart of what physical processes and biological elements need to be monitored to best insure ecosystem health and the protection of key species and ecological processes.

More specifically, there was some concern that the document was too long and that the use of some technical terms could be improved (e.g., sediment accretion for soil accretion). The description of the I&M process, the overview of the network, and the overview of SFAN natural resource issues was well done (Chapter 1). The organization of resources into realms and by ecosystem type worked well for the reviewer, although she emphasized the need for continued refinement of scale with the individual indicator models. She highly recommended the use of simulation and predictive models to aid in the process of selecting attributes to measure, with an emphasis on population models which are the most developed. In Chapter 3, she points out that not all indicators should change with changes in management priorities, particularly those indicators requiring a long-term database (e.g., weather/climate data). She suggests that indicators be sorted into high, medium, and low priority groups and, perhaps, physical vs. biological categories to facilitate management decisions. Table 3.4 which connects the selected vital signs back to the conceptual models needs significant reworking or an alternative (terminology and ecological hierarchy problems, for a start.) Despite these shortcomings, she was impressed with Chapter 3 as well. There was a noticeable lack of monitoring at the population level.

I recommend accepting her revisions as they are although I do not know how to address the issue of limited population level indicators. It seems like we have many at that level.

Reginald Barrett

The reviewer had a very limited number of comments which were minor editorial comments and a suggestion to include more citations in areas where sweeping statements are made or facts presented. Generally, he felt that a fine job was done and that the real focus and work will be in developing the protocols.

Steven Schwarzbach

The reviewer had a less than favorable review of the report saying that it was “not yet a synthetic foundation for a status and trends monitoring program integrated with the resource needs of the network.” In fact there was very little in the way of favorable comments and even fewer suggestions for revision or alternatives. In general, comments on Chapter 1 were geared toward inclusion of certain pieces of information or editorial in nature. Comments on Chapters 2 and 3 were more fundamental and are summarized in the lists below.

Chapter 2—

- Big problems with conceptual model—too generic and matrix doesn’t help create monitoring questions or choose appropriate indicators.
- Relationships are all 2 dimensional.
- No notation of relative significance.
- Adaptive management concept not built into conceptual model.
- Need to identify monitoring questions related to the conceptual model.

Chapter 3—

- Not all vital signs should change as management issues change. Need for long term monitoring and baseline data to be collected for an effective monitoring program aimed at ecological integrity. (See comments from Deborah Elliott-Fisk for idea to address this.)
- How were long term monitoring datasets that exist in the parks used in ranking the vital signs?
- Table 3.4 is not very useful (similar comments from Elliott-Fisk and John Gross). Need an alternative means to tie indicators back to conceptual models. Also need to link back to anthropogenic portion of the model.
- Measurable attributes are still vague. (Will be addressed in Phase III, not part of Phase II necessarily.)
- Water quality monitoring—threshold contamination values not identified, esp. MeHg.
- Questions regarding relative position of certain indicators.

While some of the comments are well grounded, others indicate that the reviewer did not refer to the associated appendices. Some of these comments can be addressed easily, but others will require significant reworking or the creation of an alternative (the conceptual models and Table 3.4).

John Gross

The reviewer commented positively on the length, organization, presentation, conciseness, and inclusion of materials throughout the document. Chapter 1 was well-written, with a good summary of monitoring goals and GPRA goals. There was some confusion between monitoring questions and research questions that needs to be addressed. Coverage of park and network issues as well as water resource concerns was great. The conceptual models, however, were not insightful or informative to the reviewer. There was little connection between the general model and the ecosystem models. Further, ecosystem models didn't communicate which interactions were most important and information in the boxes was redundant. The matrix would require a detailed narrative with citations specific to the region to be useful. Comments on Chapter 3 are summarized below.

Chapter 3—

- Need to make distinction between park and network vital signs. What is the relationship?
- The specific rationale for some vital signs was unclear and may be a result of lack of clarity and importance in the conceptual models.
- Review p.6 notes a lack of detail on what will be measured for each indicator, a lack of detail on what the indicator is.
- Not sure if the vital signs proposed are integrative across the major ecosystems.
- Need other “views” of table 3.4, for example using the major themes used in the conceptual models (realms, ecosystems, ecological hierarchies, drivers/stressors). Essentially need another tool to tie indicators back to CMs.

Descriptions of the process and criteria used to prioritize the vital signs was well done. Overall the report is a firm foundation for the next phase.

Synthesis

Most of the comments recognized the effort that went into preparing the report and were favorable. Aside from minor editorial changes and the addition of a few citations, the first chapter is excellent. The most significant problems lie with the conceptual models and the carry over of the models to the selection and subsequent prioritization of indicators. In other words, how did we get from the conceptual model layers presented to the list of indicators chosen for the prioritization process and the generation of monitoring questions? Two reviewers brought this up directly (Schwarzbach and Gross) and one reviewer indirectly via concerns with Table 3.4 (Elliott-Fisk). Chapter 3 has some issues, most of which relate back to the conceptual models. Since these concerns were brought up by more than one reviewer, they will need to be addressed by (1) revamping the conceptual models, (2) adding explanatory text which helps interpret the models and the selection process, (3) leaving the conceptual models as they are, or (4) some other alternative. In any event, the SFAN will need to address the reviewers' comments and document the responses for the regional coordinator.

Nearly all of the editorial comments I recommend accepting at face value.

Items that need to be addressed by the Steering Committee or a working group

- **Conceptual model comments to be addressed.(working group)
- **Table 3.4 fixed, or alternative found (working group)
- Shift monitoring questions (Table 1.12 and Appendix 7) to research questions or narrow the scale of question.
- Check for explanations of ranking of individual indicators (Chapter 3 comments from Steve S.) in Prioritization Workshop Summary. If not there, update and explain.
- Detail/descriptor for vital signs to explain what we are referring to (e.g., plant community change at multiple scales).
- Appendices 8 (Current and Historic Monitoring Programs) and 9 (Existing and Potential Monitoring Partnerships) need to be updated—not necessarily now but should be included with submission of Phase III draft
- Model components need to be supported with area-specific citations—include in protocols and detailed indicator conceptual models.